

ATTACHMENT NO. 1, PART C (for Amendment No. 4)

Scope of Services

The City of Durham has requested that Kimley-Horn provide additional design, bid phase, construction phase, and construction field services for the 3 MG Angier Avenue Elevated Water Storage Tank and Southeast Pressure Zone Booster Pump Station project. This amendment is necessary due to the additional services provided during the construction phases, as required by the Owner and the Construction Contract.

Additional funding is required to complete these tasks as outlined herein below:

ADDITIONAL CONSTRUCTION PHASE SERVICES (OFFICE)

Task 1 – Review of Additional Submittals – KHA received five (5) Submittals each for both the Generator and Motor Control Center (MCC). The Generator submittal was rejected three (3) times until approved and the MCC was marked revise and resubmit four (4) times until approved. Both KHA and our subconsultant, W. M. Piatt and Company, provided additional review and processing time for the submittals noted above.

Task 2 – East Durham Valve Vault Construction Services

The City has requested that Kimley-Horn provide additional engineering services for upgrades to the East Durham Tank and valve vault site as part of the construction efforts on the Angier EST project. These changes were associated with contractor driven issues and City requirements for availability of the tank not specified in the original contract. Such efforts include:

1. Review additional and revised shop drawings, project schedules, samples, and other data submitted for review and approval by the Contractor. Such reviews and approvals or other action will not extend to means, methods, techniques, equipment choice and usage, sequences, or procedures of construction or to related safety precautions and programs.
2. Provide additional periodic site visits by project managers, project engineers, and other staff members as appropriate, to observe the work in progress and to make appropriate reports to the City regarding project completion, scheduling, quality control, substantial compliance with the Contract Documents, permits, and approved Shop Drawings.
3. Review and make recommendations related to Change Order requests submitted or proposed by the Contractor on revised and expanded designs.

4. Review additional construction related questions from the Contractor and the City's Inspectors.

Upon completion of the work, compile and deliver to the City a complete set of Record Drawings for the expanded project conforming to information furnished to the Engineers by the Construction Contractor. This set of documents will consist of reproducible Record Drawings showing the reported location of work and a CD with an electronic version of the project. In that Record Drawings may be based on information provided by others, the Engineers cannot and do not warrant their accuracy. Record Drawings and final surveys will be in accordance with the City's Department of Public Works standards. This request is submitted in accordance with Professional Services Contract Exhibit A.2.01.3.

5. KHA also provided additional services related to contractor driven issues.

Task 3 – Work associated with Change Orders / Construction Issues – This task includes additional construction phase services, performed by KHA, associated with pending change orders and corrections due to contractor mistakes or additions at the request of the City. The specific change order and construction issue items are as follows:

- A. Final Construction Extension Services: As a result of pending change orders with associated time extensions, additional construction phase (office) services were provided to ensure the quality of the implementation of the construction change orders. KHA provided additional services associated with shop drawing review, team coordination, site visits, and review of construction related questions due to change order time extensions.
- B. Galvanized Ladder Issue: Additional coatings inspection coordination was required to ensure this item is addressed appropriately. Three additional coatings punch list site visits were coordinated and associated punch lists were produced and provided to the Contractor.
- C. Interior Wet Area Material/Coating Issue: Additional coatings inspection coordination was required to ensure that the construction of interior metal components met the construction contract specifications. This was a required additional service for KHA.
- D. FCA/bolt issues: Due to improper installations by the Contractor, additional effort associated with re-inspections and correction for this work were incurred by KHA.

This request for reimbursement is submitted in accordance with Construction Contract Section 01010.1.05.C and Professional Services Contract Exhibit A.2.01.A.3 and A.2.01.A.16. As such, the cost of KHA's additional engineering services may be charged to the Contractor.

Task 4 – Construction Phase Services Beyond Completion Date(s) – Given that the Construction Phase has extended beyond the contractual completion date(s) and per the City’s request, KHA has projected potential service times and costs associated with the potential extension of Construction Phase services to be utilized only as authorized by the City.

This request for reimbursement is submitted in accordance with Construction Contract Section 01010.1.05.C and Professional Services Contract Exhibit A.2.01.A.16.

Task 5 – Labor Cost Annual Rate Adjustment – As a result of project schedule exceeding anticipated duration – 2008 vs. 2012-2013 rates – an annual rate adjustment is requested for tasks 3 and 4. Adjustment for tasks 1, 2 and 8 were accounted for in a previous change order. The calculation rationale is as follows:

Average rate difference between original contract rates (2008) and current contract rates (2013) is approximately 13% for pertinent categories.
 $13\% + 5 = 2.6\%$ = annual average rate adjustment.

Labor cost adjustment considers 2 year contract completion delay vs. anticipated contract duration. **$2.6\% * 2 = 5.2\%$**

As such, rate adjustment only applies to construction phase services labor budgets for tasks 3 and 4.

This request is submitted in accordance with Professional Services Contract Section 3.01.B, Exhibit A.2.01.3, Exhibit C4.05.B, and Exhibit C4.08.B.

ADDITIONAL CONSTRUCTION FIELD SERVICES

Task 6 – Additional Resident Project Representative Services (Subconsultant)

- A. As of Amendment No.1, the cost for Construction Administration Services was based on a Construction Contract Time of 660 consecutive calendar days for the final completion for the construction contract. The construction contract period has increased by an additional 14 days overall due to the expansion of project duration and scope. This change has resulted in the need for 14 additional days of Resident Project Representative (RPR) Services.

This request is submitted in accordance with Professional Services Contract Exhibit C4.08.B.

- B. In accordance with Construction Contract Section 01010.1.06.B, work on Sundays or during nighttime hours (10:00 PM to 6:00 AM) results in

additional expenses to the Owner. Due to the Contractor's schedule, construction observation services were provided for 17.5 hours on Sundays and 4.5 nighttime hours

Task 7 – Additional Construction Materials Testing (Subconsultant)

- A. Due to the failed compaction testing of the subgrade material for the slab on grade, KHA provided additional construction material testing services.

This request for reimbursement is submitted in accordance with Construction Contract Section 01400.1.05.C and Professional Services Contract Exhibit A.2.02.4.

- B. We request additional funding for this task as a result of depletion of the originally estimated construction materials testing budget. The additional monies will be reserved for remaining and recently performed testing, such as asphalt pavement, concrete, and soil compaction, as necessary and approved by the City.

This request is submitted in accordance with Professional Services Contract Exhibit A.2.01.3 and A.2.01.21.

Task 8 – Concrete Analysis (KHA) – Due to the low strength of the concrete testing associated with lift #8 of the concrete pedestal, KHA provided additional engineering services, including:

- A. Review of available testing data
- B. Propose possible testing procedures to determine concrete properties
- C. Review of petrographic analysis
- D. Recommendation to the City regarding acceptance of the work

Task 9 – Change Order / Construction Issue Administration – This task includes additional construction field services associated with pending change orders and corrections due to contractor mistakes or additions at the request of the City. The specific change order and construction issue items are as follows:

- A. Final Construction Extension Services: As a result of pending change orders, additional construction field services were provided to ensure the quality of the implementation of the construction change orders. Construction field services for this task were performed by Hollins Construction Services and W. M. Piatt Company, as required.
- B. Galvanized Ladder Issue: Construction field services for this task were performed by Quinn Consulting Services.

- C. Interior Wet Area Material/Coating Issue: Construction field services for this task were performed by Quinn Consulting Services.
- E. FCA/bolt issues: Due to improper installations by the Contractor and their resistance to correct the numerous assemblies to the correct configuration, additional construction field services, associated with re-inspections and correction for this work were performed by Hollins Construction Services, as required to correct this issue.

Task 10 – Construction Phase Field Services Beyond Completion Date(s) –

Given that the Construction Phase has extended beyond the contractual completion date(s) and per the City's request, KHA has projected potential service times and costs associated with the potential extension of Construction Phase services to be utilized only as authorized by the City. The anticipated field services include Resident Project Representative Services for site/civil and electrical/instrumentation work.

This request for reimbursement is submitted in accordance with Construction Contract Section 01010.1.05.C and Professional Services Contract Exhibit A.2.01.A.16. As such, the cost of KHA's additional engineering services may be charged to the Contractor.